RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	10/5/1.	9/41	7	
Source:		PCT		
Date Processed by STIC:		//3/	26	
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PCT

RAW SEQUENCE LISTING DATE: 01/13/2006 PATENT APPLICATION: US/10/511,914A TIME: 09:55:19

Input Set : A:\37 Sequence Listing.txt
Output Set: N:\CRF4\01132006\J511914A.raw

```
3 <110> APPLICANT: Loiler, Scott A.
        Flotte, Terrance R.
 5
        Muzyczka, Nicholas
        Atkinson, Mark
 8 <120> TITLE OF INVENTION: IMPROVED rAAV VECTORS
10 <130> FILE REFERENCE: 36689.37
12 <140> CURRENT APPLICATION NUMBER: 10/511,914A
13 <141> CURRENT FILING DATE: 2004-10-18
15 <150> PRIOR APPLICATION NUMBER: PCT/US03/12225
16 <151> PRIOR FILING DATE: 2003-04-17
18 <150> PRIOR APPLICATION NUMBER: 60/373,419
19 <151> PRIOR FILING DATE: 2002-04-17
21 <160> NUMBER OF SEQ ID NOS: 49
23 <170> SOFTWARE: PatentIn version 3.3
25 <210> SEO ID NO: 1
26 <211> LENGTH: 13
27 <212> TYPE: PRT
28 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
32 Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp
33 1
             ,
                   5
36 <210> SEQ ID NO: 2
37 <211> LENGTH: 13
38 <212> TYPE: PRT
39 <213> ORGANISM: Homo sapiens
41 <400> SEQUENCE: 2
43 Ser His Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg Asp
44 1
47 <210> SEQ ID NO: 3
48 <211> LENGTH: 13
49 <212> TYPE: PRT
50 <213> ORGANISM: Pupaia glis
52 <400> SEQUENCE: 3
54 Ser His Leu Arq Lys Met Arq Lys Arq Leu Leu Arq Asp
58 <210> SEQ ID NO: 4
59 <211> LENGTH: 13
60 <212> TYPE: PRT
61 <213> ORGANISM: Bos taurus
63 <400> SEQUENCE: 4
65 Ser His Leu Arg Lys Leu Pro Lys Arg Leu Leu Arg Asp
66 1
69 <210> SEQ ID NO: 5
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Input Set : A:\37 Sequence Listing.txt
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70 <211> LENGTH: 13
     71 <212> TYPE: PRT
     72 <213> ORGANISM: Homo sapiens
     74 <400> SEQUENCE: 5
     76 Ser His Leu Arg Lys Leu Arg Gln Arg Leu Leu Arg Asp
     77 1
                        5
     80 <210> SEQ ID NO: 6
     81 <211> LENGTH: 13
     82 <212> TYPE: PRT
     83 <213> ORGANISM: Canis familiaris
     85 <400> SEQUENCE: 6
     87 Ser His Met Arg Lys Leu Arg Lys Arg Val Leu Arg Asp
     88 1
     91 <210> SEO ID NO: 7
     92 <211> LENGTH: 13
     93 <212> TYPE: PRT
     94 <213> ORGANISM: Rattus norvegicus
     96 <400> SEQUENCE: 7
     98 Ser His Leu Arg Lys Met Arg Lys Arg Leu Met Arg Asp
     99 1
     102 <210> SEQ ID NO: 8
     103 <211> LENGTH: 13
     104 <212> TYPE: PRT
     105 <213> ORGANISM: Mus musculus
     107 <400> SEQUENCE: 8
     109 Ser His Leu Arg Arg Leu Arg Arg Leu Leu Arg Asp
    110 1
    113 <210> SEQ ID NO: 9
    114 <211> LENGTH: 13
    115 <212> TYPE: PRT
    116 <213> ORGANISM: Artificial
     118 <220> FEATURE:
     119 <223> OTHER INFORMATION: Synthetic Peptide
    122 <220> FEATURE:
    123 <221> NAME/KEY: misc feature
    124 <222> LOCATION: (3)..(3)
    125 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    127 <220> FEATURE:
    128 <221> NAME/KEY: misc_feature
     129 <222> LOCATION: (5)..(8)
     130 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    132 <220> FEATURE:
    133 <221> NAME/KEY: misc feature
    134 <222> LOCATION: (10)..(11)
    135 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    137 <400> SEQUENCE: 9
W--> 139 Ser His Xaa Arg Xaa Xaa Xaa Arg Xaa Xaa Arg Asp
    143 <210> SEQ ID NO: 10
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Input Set : A:\37 Sequence Listing.txt
Output Set: N:\CRF4\01132006\J511914A.raw

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144 <211> LENGTH: 13
     145 <212> TYPE: PRT
     146 <213> ORGANISM: Artificial
     148 <220> FEATURE:
    149 <223> OTHER INFORMATION: Synthetic Peptide
    152 <220> FEATURE:
    153 <221> NAME/KEY: misc feature
    154 <222> LOCATION: (3)..(3)
    155 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    157 <220> FEATURE:
    158 <221> NAME/KEY: misc feature
    159 <222> LOCATION: (5)..(8)
    160 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    162 <220> FEATURE:
     163 <221> NAME/KEY: misc feature
     164 <222> LOCATION: (10)..(11)
     165 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     167 <400> SEQUENCE: 10
W--> 169 Ser His Xaa Arg Xaa Xaa Xaa Arg Xaa Xaa Arg Asp
     170 1
     173 <210> SEQ ID NO: 11
     174 <211> LENGTH: 10
     175 <212> TYPE: PRT
     176 <213> ORGANISM: Homo sapiens
     178 <400> SEQUENCE: 11
     180 Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg
    181 1
     184 <210> SEQ ID NO: 12
    185 <211> LENGTH: 10
     186 <212> TYPE: PRT
     187 <213> ORGANISM: Homo sapiens
     189 <400> SEQUENCE: 12
     191 Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg
    192 1
                         5
    195 <210> SEQ ID NO: 13
    196 <211> LENGTH: 10
    197 <212> TYPE: PRT
    198 <213> ORGANISM: Tupaia glis
    200 <400> SEQUENCE: 13
    202 Leu Arg Lys Met Arg Lys Arg Leu Leu Arg
    203 1
    206 <210> SEQ ID NO: 14
    207 <211> LENGTH: 10
    208 <212> TYPE: PRT
    209 <213> ORGANISM: Bos taurus
    211 <400> SEQUENCE: 14
    213 Leu Arg Lys Leu Pro Lys Arg Leu Leu Arg
    217 <210> SEQ ID NO: 15
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Input Set : A:\37 Sequence Listing.txt Output Set: N:\CRF4\01132006\J511914A.raw

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218 <211> LENGTH: 10
     219 <212> TYPE: PRT
     220 <213> ORGANISM: Homo sapiens
     222 <400> SEQUENCE: 15
     224 Leu Arg Lys Leu Arg Gln Arg Leu Leu Arg
     225 1
                       5
     228 <210> SEQ ID NO: 16
     229 <211> LENGTH: 10
     230 <212> TYPE: PRT
     231 <213> ORGANISM: Canis familiaris
     233 <400> SEQUENCE: 16
     235 Met Arg Lys Leu Arg Lys Arg Val Leu Arg
     236 1
     239 <210> SEQ ID NO: 17
     240 <211> LENGTH: 10
     241 <212> TYPE: PRT
     242 <213> ORGANISM: Rattus norvegicus
     244 <400> SEQUENCE: 17
     246 Leu Arg Lys Met Arg Lys Arg Leu Met Arg
     247 1
     250 <210> SEQ ID NO: 18
     251 <211> LENGTH: 10
     252 <212> TYPE: PRT
     253 <213> ORGANISM: Mus musculus
     255 <400> SEQUENCE: 18
     257 Leu Arg Arg Leu Arg Arg Leu Leu Arg
     258 1
     261 <210> SEQ ID NO: 19
     262 <211> LENGTH: 10
     263 <212> TYPE: PRT
     264 <213> ORGANISM: Artificial
     266 <220> FEATURE:
     267 <223> OTHER INFORMATION: Synthetic Peptide
     270 <220> FEATURE:
     271 <221> NAME/KEY: misc_feature
     272 <222> LOCATION: (1)..(1)
     273 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     275 <220> FEATURE:
     276 <221> NAME/KEY: misc feature
    277 <222> LOCATION: (3)..(6)
     278 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    280 <220> FEATURE:
    281 <221> NAME/KEY: misc_feature
    282 <222> LOCATION: (8)..(9)
    283 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    285 <400> SEQUENCE: 19
W--> 287 Xaa Arg Xaa Xaa Xaa Arg Xaa Xaa Arg
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291 <210> SEQ ID NO: 20

RAW SEQUENCE LISTING

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Input Set : A:\37 Sequence Listing.txt
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PATENT APPLICATION: US/10/511,914A

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292 <211> LENGTH: 10
     293 <212> TYPE: PRT
     294 <213> ORGANISM: Artificial
     296 <220> FEATURE:
     297 <223> OTHER INFORMATION: Synthetic Peptide
     300 <220> FEATURE:
     301 <221> NAME/KEY: misc_feature
     302 <222> LOCATION: (1)..(1)
     303 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     305 <220> FEATURE:
     306 <221> NAME/KEY: misc feature
     307 <222> LOCATION: (3)..(6)
     308 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     310 <220> FEATURE:
     311 <221> NAME/KEY: misc feature
     312 <222> LOCATION: (8)..(9)
     313 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     315 <400> SEQUENCE: 20
W--> 317 Xaa Arg Xaa Xaa Xaa Xaa Arg Xaa Xaa Arg
     321 <210> SEQ ID NO: 21
     322 <211> LENGTH: 18
     323 <212> TYPE: PRT
     324 <213> ORGANISM: Artificial
     326 <220> FEATURE:
     327 <223> OTHER INFORMATION: Synthetic Peptide
     329 <400> SEQUENCE: 21
     331 Asp Trp Leu Lys Ala Phe Tyr Asp Lys Val Ala Glu Asp Leu Asp Glu
     332 1
                                             10
     335 Ala Phe
     339 <210> SEQ ID NO: 22
     340 <211> LENGTH: 28
     341 <212> TYPE: PRT
     342 <213> ORGANISM: Artificial
     344 <220> FEATURE:
     345 <223> OTHER INFORMATION: Synthetic Peptide
     347 <400> SEQUENCE: 22
     349 Leu Arg Lys Leu Arg Lys Arg Leu Leu Arg Asp Trp Leu Lys Ala Phe
     350 1 5
     353 Tyr Asp Lys Val Ala Glu Asp Leu Asp Glu Ala Phe
     354
                    20
     357 <210> SEQ ID NO: 23
     358 <211> LENGTH: 28
     359 <212> TYPE: PRT
     360 <213> ORGANISM: Artificial
     362 <220> FEATURE:
     363 <223> OTHER INFORMATION: Synthetic Peptide
     365 <400> SEQUENCE: 23
     367 Leu Arg Lys Leu Arg Glu Arg Leu Leu Arg Asp Trp Leu Lys Ala Phe
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/13/2006
PATENT APPLICATION: US/10/511,914A TIME: 09:55:21

Input Set : A:\37 Sequence Listing.txt
Output Set: N:\CRF4\01132006\J511914A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; Xaa Pos. 3,5,6,7,8,10,11 Seq#:10; Xaa Pos. 3,5,6,7,8,10,11 Seq#:19; Xaa Pos. 1,3,4,5,6,8,9 Seq#:20; Xaa Pos. 1,3,4,5,6,8,9 Seq#:30; Xaa Pos. 1,3,4,5,6,8,9 Seq#:31; Xaa Pos. 1,3,4,5,6,8,9 Seq#:47; Xaa Pos. 1,2,3,4,5,6,7,8

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:9,10,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41 Seq#:42,43,44,45,46,47,48,49

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/511,914A

DATE: 01/13/2006 TIME: 09:55:21

Input Set : A:\37 Sequence Listing.txt
Output Set: N:\CRF4\01132006\J511914A.raw

L:139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:287 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:509 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0
L:543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:0
L:775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0